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ABSTRACT

This study examined the oral reading behavior of five junior college students of below average reading proficiency. The Reading Miscue Inventory (RMI) was used to analyze and compare the miscues they generated while reading two selections varying in difficulty. The study addressed itself to two main questions: Do these readers use a process consistent with the Goodman model of reading? Does the process differ in any way from that used by eighth and tenth graders reading the same selection? The results indicated that: in general the predictive and explanatory powers of the model were confirmed; the operations of the grapho-phonemic, syntactic, and semantic language cueing systems were apparent; during more difficult reading, grapho-phonemic cues were more closely attended to by all subjects and syntactics cues continued to function strongly, while semantic cues became so weak that many miscues, though grammatically correct, failed to reproduce the intended meaning of the text; and a comparison of selected results with eighth and tenth graders suggests that junior college students manipulated the text more freely. Further research using the RMI with older readers of varying proficiency was suggested. (WR)

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A PSYCHOLINGUISTIC ANALYSIS OF ORAL READING MISCUES BY JUNIOR COLLEGE STUDENTS

A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

OF

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THE STATE UNIVERSITY OF NEW JERSEY

BY

DOROTHEA R. HOFFNER

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

MASTER OF EDUCATION

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CHAPTER I

INTRODUCTION

Background of the Study

Prior to 1960, few reading studies were theory based; and few sought to develop a theoretical framework within which studies could be replicated. As a result, little progress was made toward a coherent understanding of the reading process. As Goodman (1973) points out, most of the data accumulated could not be organized in any systematic way to move the field toward new insights and syntheses--and eventually toward the solution of problems. Moreover, the failure to develop a comprehensive understanding of the reading process left the field of reading instruction, itself, with no theoretical basis for developing sound, effective methods and materials.

During the last decade, however, the picture has changed. Kling (1971), after reviewing five major reviews of reading research in his introduction to The Literature of Research in Reading with Emphasis on Models, observes that serious reappraisal has resulted in a new trend toward more basic, theoretical, interdisciplinary research and model building. He reviews both the

dangers and advantages of model building, but in the final analysis concludes that a model is the only proper basis of theoretical research. To expedite such research, he recommends that all models compete in an open system, and that models from at least the five disciplines: psychology, psycholinguistics, information processing, sociolinguistics and the biobehavioral sciences be subject to longitudinal study--from birth through maturity.

The Goodman Model

Goodman (1970) has formulated one of the more comprehensive models which has been subjected to extensive testing in recent years. It views reading as a psycholinguistic process, one in which the reader functions as a user of language. Developed and refined throughout ten years of psycholinguistic research, it focuses upon oral reading miscues. Goodman (1973) relates:

> Early in the ten year span we became aware that reading is not the accurate process it has often been assumed to be and that even effective readers make miscues, unexpected responses, when they encounter unfamiliar written language. A key assumption in the research has been that these miscues are generated in the reader in the same way that expected responses are and with use of the same information. They are miscues in the sense that the reader, in the process of reading, makes a deviation from the path that would lead to the expected responses. By analyzing the ways that ER (expected response) and OR (observed response) are different, we have been able to see the process at work, and to create a model of that process [p. 1].

Essentially, the model sees reading as a constructive process in which the reader seeks actively to reconstruct from a graphic display a message which the writer has encoded. Carlson (1970) reminds us that the model does not view reading as a precise, sequential perception and identification of words, which are recoded into spoken language, from which meaning is cumulative bit by bit. Rather, it views reading as a process of sampling, predicting, verifying.

The reader samples the graphic stimuli and makes predictions based upon the grapho-phonemic, syntactic and semantic cues within the text and the constraints within himself. These constraints have been built up over the years through his experience with language, with the printed page, with the world. His predictions are tested and verified using the same cues and constraints, and the sampling and predicting continues. At all times, the reader's goal is getting the meaning.

In this "psycholinguistic guessing game" (Goodman, 1970), the proficient reader selects the fewest most productive cues necessary to produce guesses that are right the first time. "Reading involves strategies more than skills [Goodman, 1973, p. 2]."

Acting on his premise that an analysis of oral

reading miscues reveals the reading process at work, Goodman and his associate, Carolyn Burke (Goodman & Burke, 1968) developed and have since refined (Burke, 1969) a taxonomy which analyzes the miscues on the basis of their psycholinguistic relationship to the text. The Goodman Taxonomy of Reading Miscues, a complete outline of which can be found in Goodman's (1973) latest study, considers eighteen major categories: correction, dialect, graphic proximity, phonemic proximity, allologs, syntactic acceptability, semantic acceptability, transformation, syntactic change, semantic change, intonation, five levels of structural involvement from submorphemic to clause, grammatical category and surface structure of O.R., and O.R. in visual periphery. Thus, the interaction of the language and thought processes of the writer and reader can be examined; and a systematic treatment and categorization of all phenomena occurring during oral reading is made possible.

The development of the Taxonomy has stimulated extensive testing of the Goodman Model with varying age, proficiency and ethnic groupings, under different conditions, using a variety of materials. The majority form a corpus known as the Wayne State Studies, some of which are reviewed in Chapter II of this study.

Goodman's (1973) most comprehensive study, Theoretically Based Studies of Patterns of Miscues in Oral Reading Performance, took a longitudinal look at readers varying in proficiency from second through tenth grade. The predictive and explanatory powers of his model were confirmed at all levels. In addition, certain developmental variations in the functioning of its components were noted.

A modified version of the Taxonomy, the Reading Miscue Inventory (RMI) has been developed by Y. Goodman and C. Burke (1972). Designed for classroom and clinical use, it is less complex, dealing with nine categories: intonation, dialect, graphic similarity, sound similarity, grammatical function, correction, grammatical acceptability, semantic acceptability and meaning change. Interrelationship patterns of the categories help to assess the functioning and interaction of the three cueing systems, and to reveal more clearly the strategies a reader is using.

Because of its ease of administration, the RMI has recently stimulated some basic research. The studies of Burke (1973) and Brody (1973) are reviewed in Chapter II.

Statement of the Problem

Kling (1971) recommends that a model be tested from birth to maturity to confirm its validity. Goodman's (1973) longitudinal study dealt with readers from second through tenth grade. Although it represents a relatively full range of readers, it does leave out adults at varying levels of proficiency.

This research will analyze the oral reading miscues of a selected group of junior college readers using the Reading Miscue Inventory. By contrasting their actual reading with the expected reading of two selections varying in difficulty, insight will be gained into their use and misuse of available cues and the processes by which they read.

The study of older readers within Goodman's Theoretical framework will further test the predictive and explanatory powers of the Goodman Model. The comparison of data with the longitudinal study (Goodman, 1973) will extend the developmental insights thus far perceived.

Essentially, then, this descriptive study seeks to answer two questions:

1. Does this group of junior college readers use a process consistent with the Goodman Model of Reading?

2. How do they compare in their handling of grapho-phonemic, syntactic and semantic cues with eighth and tenth graders who read the same selections?

Significance and Limitations of the Study

Primarily, this research is descriptive in nature, extending Goodman's (1973) longitudinal study to the junior college level. It tests the Goodman Model of Reading with an older group of readers and provides data which, within certain limitations, can be compared to the data on lower grade readers--thus extending the developmental pattern. Hopefully, it contributes to an increasingly comprehensive understanding of the reading process.

The small number of subjects (five) will provide no basis for generalizing to all junior college readers of below-average proficiency, but the in-depth nature of the analysis within the well-defined framework of the RMI will start a data bank to which other similar studies can contribute.

The RMI itself will be tested as to its facility of administration, its validity at this level and its usefulness as a research instrument.

Only within certain limitations can the data from

this study be compared with that from Goodman's (1973). In the first place, the Taxonomy was used for that study; whereas, the RMI is used for this. Therefore, nine categories cannot be compared. Furthermore, the spectrum of possible answers to any one of the questions is far wider in the Taxonomy than in the RMI, which means that several of the nine categories left can be only roughly compared at best. For instance, there are nine possible levels of graphic proximity in the Taxonomy; only three in the RMI.

In addition to the limitations imposed by using the RMI, there are limitations imposed by the subjective nature of many of the judgments concerning most of the categories--particularly about semantic acceptability and degree of meaning change. It is conceivable that the judgment of two researchers could differ considerably in many instances.

Finally, limitations are imposed by the nature of the oral reading process as manifested by readers at this older level. Menosky (1971) and Burke (1969) warn that oral reading behavior changes around grade six, at which time there is less focus on oral reading in the schools. With an increase in silent reading, there seems to be an increased ability to handle deep structure; and the need for overt corrections tends to drop. Evidence of this is

the extended pause which frequently accompanies a reading miscue but very often is hard to detect. The data must be viewed with the possibility of silent correction in mind.

CHAPTER II

REVIEW OF THE LITERATURE

This review will confine itself mostly to research based on the Goodman Model.

Other models and partial models have been well reviewed elsewhere. Geyer (1971) describes forty-three: eight comprehensive models specifically of the reading process (including Goodman's), fifteen comprehensive models of processes related to reading and twenty partial models of processes involved in or related to reading. Many of the models make use of linguistic, psychological and psycholinguistic insights; some closely related to Goodman's research. Geyer cautions, however, that application to normal reading of most of the models is a long way off. He does note that a rapidly expanding data base is beginning to reveal areas of agreement moving in general toward a widening acceptance of the information-processing point of view. This point of view, which is basic to Goodman's Model, is described by Athey (1971). It suggests that the reader or listener imposes patterns on the stream of "noise" passing before his senses in an attempt to impose meaning, which he verifies by many

kinds of feedback (visual, auditory, syntactic, semantic, etc.).

Oral Reading Studies

An understanding of the history of oral reading studies is basic to a review of research based on the Goodman Model. Weber (1968), in a thorough review, cites the negative regard in which oral reading errors were held in the past. Most investigators considered them indicative of perceptual inadequacies or evidence of poor sight vocabulary--in effect, quantitative signs of reading problems and reader deficiencies. Few investigators recognized the psychological or linguistic significance of such "errors."

Several studies reviewed by Burke (1973) presented pertinent conclusions concerning the importance of syntactic and semantic cues not only in processing meaning but in actually perceiving graphic phenomena. However, most of the studies categorized errors so arbitrarily that data could not be compared. Even the later linguistically based studies by Clay (1968), Weber (1970), Nurss (1969) and Kolers (1970), although recognizing the significance of oral miscues, did not provide data in a form which could be easily compared.

It was Goodman's study in 1965 which called

attention not only to the positive value of studying oral reading errors as clues to the reading process, but to the advantages of a taxonomy for categorizing them. In this early experiment, Goodman compared the errors made by first, second and third graders when reading words in isolated list form and when reading those same words in story form. Very few words were recognized out of context by any of the students, but those in context were handled with increasing success at each higher grade level. It seemed apparent to Goodman that syntactic and semantic cues were functioning here. He noticed that if an error did not significantly change the meaning or if the student was overdependent upon graphic cues--thereby sacrificing meaning--the error remained uncorrected. He noticed that regressions were significant attempts by readers to correct or review or prepare for an inconsistency. It was from this study that Goodman conceived of his model and developed the first edition of his taxonomy.

Studies Based on the Goodman Model

The first major test of the model and taxonomy was undertaken by Goodman and Burke (1968) in their study of proficient readers in the fourth and fifth grades. An addition to the taxonomy resulted from Burke's (1969)

study of miscues involving grammatical restructurings generated by highly proficient sixth-grade readers. Allen's (1969) examination of the oral reading substitutions of second, fourth and sixth graders substantiated the findings of these two studies.

The taxonomy has been used by a number of other researchers to further investigate the miscue phenomenon. Y. Goodman's (1967) developmental study looked at first grade reading achievement. Page (1970) moved toward a classification of miscue phenomena in relation to graded materials by analyzing the miscues of subjects reading a range of materials coded from preprimer to grade six. Carlson (1970) compared the miscues of fourth graders reading science, social studies and basal reading texts all coded at grade level. Martellock (1971) looked at the relationship of the child's writing to his oral reading and analyzed errors made when subjects read their own manuscripts.

Menosky (1971) described the qualitative differences among miscues generated in varying portions and lengths of text read by second, fourth, sixth and eighth graders. Gutknecht (1971) studied the miscues made by subjects who had been identified as perceptually handicapped. Sims (1972) looked at miscues generated by Black

subjects during their reading of both standard and Black dialect materials. Rousch (1972) studied the effect of highly relevant conceptual background on reading. Romatowski (1972) studied reading of Polish and English texts by bilingual subjects.

The studies all confirm the operation of three cueing systems: grapho-phonemic, syntactic and semantic--the efficiency of their functioning and interaction differing, depending on the reader's proficiency and the nature of the reading materials.

All studies indicate the controlling nature of syntactic constraints--for both poor and good readers. All readers generate a consistently higher percentage of syntactically acceptable than semantically acceptable miscues. Moreover, all readers are more likely to correct a miscue resulting in syntactic anomaly rather than semantic anomaly. Goodman and Burke (1968) conclude that readers have an intuitive grasp of syntactic structure which underlies the reading process, and their seeking of structure is basic to their search for meaning.

The studies note the secondary place of grapho-phonemic cues in the reading strategies of efficient readers--as early as the second grade. Goodman and Burke (1968) observed that graphic cues appeared not to be

involved in 34% of the miscues of their proficient fourth and fifth graders. As a matter of fact, these readers did not depend overly much on any one cueing system, but seemed able to integrate the functioning of all three, shifting emphasis when necessary.

In contrast, Gutknecht (1971) noted the inability of his perceptually impaired subjects to shift strategies when necessary. Several persisted in using grapho-phonemic cues even when these proved unsuccessful. Y. Goodman (1967) found that too often the less proficient first-grade readers corrected miscues that were totally acceptable syntactically and semantically, indicating that they too concentrated on the grapho-phonemic cueing system to the detriment of the others.

The studies suggest that reading effectiveness decreased most dramatically when the semantic cues become weak. Carlson (1970) found that even normal fourth graders, when confronted with the semantic difficulties of social studies and science texts, tended to concentrate upon the syntactic and grapho-phonemic cues--avoiding the semantic. Martellock's study confirms this by reverse procedure. When reading their own manuscripts, her subjects generated miscues with higher semantic proximity to the text. Syntactic cues seemed to decrease in

relative importance, and meaning was processed with high efficiency. Likewise, Menosky (1971) observed that the miscues of low fourth graders increased in syntactic and semantic acceptability as they proceeded through the text, being highest toward the end, as redundancy became greatest.

The studies suggest some developmental trends. Burke (1969) observed the increasing facility of the reader to use language in each succeeding age group. Menosky (1971) found that although the material read by her eighth graders had many complex phrase-clause structures, these readers were able to insert or delete without losing the meaning--in contrast to the second graders in her study. The older readers seemed more able to fit their own language use to the material--to manipulate the language--obviously operating on a higher structural level than the younger readers.

Goodman's (1973) Longitudinal Study

A fuller developmental picture is revealed in the three year longitudinal study by Goodman (1973), which examined readers at proficiency levels ranging from low second grade to high tenth grade. Pertinent findings are summarized below.

Quantity of miscues. On the surface, the data

shows a fairly consistent negative correlation between miscue quantity and reading proficiency. Readers who are efficient tend to produce fewer miscues. However, the ranges of miscues per hundred words (MPHW) tend to overlap to the extent that one cannot judge proficiency on that factor alone.

Quality of miscues. In all groups there is an appreciable reduction of MPHW when miscues which do not disrupt meaning are subtracted, but the difference between this residual quantity and the total quantity tends to be proportionately greater for lower MPHW levels. Again, the range within average and low groups was very great; but the tendency toward fewer higher quality miscues was very definite among high proficiency readers at all grade levels.

Syntactic and semantic acceptability. In general, means for semantic acceptability were always at least 15-20% below syntactic. However, the gap was not constant and varied greatly between proficiency levels and with reading selections of varying difficulty. Story difficulty affected both, but semantic acceptability was more seriously affected. When reading two selections of varying difficulty, highly proficient tenth graders showed a drop in syntactic acceptability of 8.4% for the more

difficult story; whereas, semantic acceptability dropped 22.7%. The relative decreases for high-average tenth graders were 11.8% and 30.6%; and for low-average, 13.1% and 36.2%. Low readers had so few semantically acceptable miscues for the easier story they read that the drop for the difficult story was not so great.

The data shows that there is a tendency for syntactic acceptability to increase with reading proficiency. Low readers above sixth grade did increase the syntactic acceptability of their miscues particularly if the story was not too difficult, although even high readers in eighth and tenth grade dropped somewhat on a more difficult task.

In contrast, increasing semantic acceptability is a developmental pattern only for high and average readers. Maturation through the grades is not at all apparent among less efficient low readers who remained, in fact, rather uniform in their lack of ability to produce semantically acceptable miscues.

Grapho-phonemic proximity. Readers tend to rely more heavily upon the graphic than the phonemic system; the reverse is true only when the reader is attending more to grammar and meaning.

Only low second graders showed any definite

evidence of inability or lack of confidence in using grapho-phonemic information. Differences in ability to use "phonics" apparently did not exist among other readers of varying age or proficiency. Those groups which read two stories of varying difficulty encountered many more unfamiliar words in the more difficult story, in contexts which were complex, where it was hard to derive deep structure and meaning. Still, they were all equally successful in producing non-words of high graphic and phonemic proximity. They did show a decreasing percentage of non-words as proficiency increased, but this was not a function of "word attack skill."

Furthermore, the relationships between comprehending and grapho-phonemic proximity actually reversed themselves, being positive in grades two and four; and increasingly negative from grades six to ten. In the three higher grades, concern for accuracy is either at the expense of meaning or an alternative the reader chooses when he loses meaning.

Correction patterns. All groups except low tenth graders tended to correct a considerably higher percentage of syntactically unacceptable than fully acceptable miscues. As noted before, syntactic anomaly triggers correction more consistently than semantic anomaly.

When meaning is lost completely, as often happened in more difficult selections, it is apparently too hard to recover. Miscues acceptable with prior portions of the text are more likely to be corrected.

Miscues of moderate or high graphic and phonemic proximity are not likely to be corrected unless the reader's attention is drawn to them by grammar or meaning.

The factors involved in correction appear to be so complex, all in all, that they produce a kind of leveling off, so that the data showed no group correcting more than 38% of its miscues.

Dialect. Less proficient readers showed more dialect involvement, but there is no clear cause-effect relationship. Some proficient readers were Black speakers of low status dialects. Dialect difference or dialect rejection does not appear to cause difficulty in learning to read.

Shifts from the author's to the reader's dialect occurred among most readers in this study. They tended to make fewer dialect shifts when the task was harder and they were less relaxed.

Transformations. The percent of miscues that involve no transformation is successively higher among low

readers in higher grades. There is no such developmental pattern among average and high readers who tend to cluster in all grades at about 35%.

Average readers above grade four and all high readers show few miscues where deep structure is lost. Only the low groups again show any developmental pattern in acquiring the ability to achieve deep structure.

Levels of miscue involvement. More than one level of language process is involved in virtually every miscue, but readers of varying ages and proficiency show different percentages of miscues at each level. Proficiency, rather than grades, seems to be the key here, however. High readers at every grade level, with the possible exception of second, do a better job of predicting structure and meaning on the basis of selected cues. Low readers seem less able to retain in memory long units of syntactic and semantic cues. They consequently do less predicting and are more tied to the word level.

At all levels of proficiency, substitutions are the most frequently occurring phenomena. However, proficient readers make lower percentages of substitutions and higher percentages of omissions and insertions than do poorer readers. These mainly involve function words

and minor transformations which do not disrupt meaning.

Peripheral involvement. This is not a random phenomena. Words are pulled in from the peripheral field only if they fit in some way with the semantic, syntactic and graphic cues the reader is processing and the predictions he is making. Insertions are more likely influenced than substitutions. Function word miscues more likely involve the peripheral field than non-function words. The tendency to be influenced by the peripheral field remains relatively constant as proficiency increases, while other factors contributing to miscues diminish, so that the factor emerges increasingly as a more significant contributor to miscues.

Goodman sums up the entire study:

> The analysis showed reading at all levels to be consistent with the Goodman model of reading. Low proficiency readers are using the same process as high proficiency readers but less well. They are less efficient because they use more graphic, syntactic, and semantic information than they need, they have less productive strategies for using this information; and they are less effective because they lose more of the potential meaning.
>
> The analysis revealed no hierarchy of skills in reading development. Beyond the lowest levels, there was no notable difference in handling graphic cues. Differences in ability to handle syntax disappear among readers of moderate to high proficiency. The single consistent difference between groups at successive levels of proficiency is in their ability to comprehend what they read. The single best indicator of reading proficiency is the percent of miscues semantically acceptable before correction. [Goodman, 1973, Abstract].

Studies Using the RMI

Burke (1973) examined the oral reading miscues of six average first graders. Three had been taught by an analytic method; three by a synthetic. The prediction that the former three would use all cueing systems more efficiently and have better comprehension was confirmed. Burke suggested that the RMI is a valuable clinic and classroom instrument, but that the Goodman Taxonomy of Miscues is the more appropriate research instrument.

Brody (1973) analyzed the oral miscues of proficient and retarded readers both reading at the fourth grade level in order to determine qualitative differences in reading strategies. Both groups made at least moderate use of all cueing systems, but the remedial group made more miscues and showed less efficient use of grapho-phonemic cues. The remedial group's miscues increased more rapidly as they proceeded through the text. Grapho-phonemic similarity and matching grammatical function of word substitutions remained at the same level, however. Brody concluded that as they tired, they tended to rely more on mechanical strategies rather than syntactic and semantic cues. She suggests further examination of the RMI as a diagnostic tool in the area of remediation.

CHAPTER III

PROCEDURE

In this study, the basic procedure for miscue analysis was followed using the modified coding methods of the Reading Miscue Inventory. The steps are carefully outlined in the Reading Miscue Inventory Manual by Yetta M. Goodman and Carolyn L. Burke (Goodman & Burke, 1972).

Briefly, five subjects were asked to read two selections at different sittings, orally, with no help. The readings were audiotaped while the investigator recorded the miscues on a typed script or worksheet. After each reading, the subjects were asked to recall the selection unaided except by general questions or specific ones based on information already offered by the subject.

Selection of Subjects

Five students were selected from the Freshman Developmental Reading Class at a junior college. They were all white, male and 17-18 years old. All scored below the 50th percentile on the Reading Section of the SRA Junior College Placement Test (1964). I.Q.'s, according

to the same test, ranged from 98-116.

Their scores on the Nelson-Denny Reading Test (1960), Form A, given at the beginning of the Fall semester, ranged from the fifth percentile to the thirtieth percentile as compared with other college freshmen. A breakdown of the test scores is given in Table 1. All are in percentile rank except I.Q.

TABLE 1

PROFILE OF SUBJECTS

Tests	A	B	C	D	E	Mean
SRA JCPT Reading Test	30	21	40	33	47	34
Nelson-Denny Form A						
Vocabulary	6	31	34	44	42	31
Comprehension	11	40	35	21	25	26
Total	8	35	34	31	32	28
I.Q.	104	109	98	108	116	107

Subject A's Nelson-Denny scores were atypical of the group, but his other scores were comparable; and, interestingly enough, he placed in the 85th percentile on the Mathematics Section of the Junior College Placement Test. Subjects D and E had considerably higher vocabulary

scores than comprehension, a variable which will be considered in the results.

Selection of Reading Materials

These two selections were chosen (a) to provide contrasting reading experiences within the group and (b) to provide direct comparison with Goodman's (1973) study which used these same materials. In that study, "Poison" was read by tenth graders of high, high-average, low-average proficiency, as well as eighth graders of high proficiency. "Why We Need a Generation Gap" was read by these same groups as well as tenth graders of low proficiency.

"Poison" is a short story by the British writer Raould Dahl (1953). In this story, a man comes home to discover that his housemate believes a small deadly snake is lying on his stomach. A Hindu physician is summoned. He injects the housemate with anti-venom serum and soaks the mattress with chloroform. When the covers are removed, after a long tense period, no snake is found. The doctor suggests it was imagined, whereupon the man explodes with racial slurs against his benefactor.

The reading level is sixth grade according to Fry's Readability Formula (Fry, 1968). The words are simple, but the sentences are long and compound--an

average of sixteen words each. However, the syntax is not complex. Most sentences are active voice, with very little subordination. Told in the first person by the victim's housemate, the style exemplifies his dull, unimaginative personality. The selection (which will be referred to as Poison) is 4,245 words long and is detailed to the point of tedium. A sample portion of the text can be found in Appendix A.

"Why We Need A Generation Gap" by Roger Rapoport appeared in Look Magazine, December 13, 1970. This essay presents a unique view of a well-used, controversial subject. It employs many subtle references to contemporary politics, people and events which are still relevant. The author, a college student, makes his point about the distinctive nature of this generation gap and the different nature of the next by the use of complex rhetorical devices such as negative discard, metaphor and simile. The syntax, also, is complex--involving more subordination, apposition and parallel clauses in opposition. According to Goodman (1973), this selection has a higher percentage of noun modifiers and function words--in particular, clause markers and verb markers.

According to Fry's Formula, the readability of "Why We Need a Generation Gap" is at the tenth grade

level. The selection (which will be referred to as Generation Gap or G. G.) is 1,383 words long. The complete text can be found in Appendix A.

RMI Evaluation

The worksheets were carefully checked with the taped readings to complete the marking and verify their accuracy. In addition to those miscues outlined in the RMI, all repetitions and pauses were marked.

The miscues to be coded were entered next to the corresponding expected response on the RMI Coding Sheet. A sample can be found in Appendix C. Each miscue was compared to the text in the light of nine questions:

1. DIALECT. Is a dialect variation involved in the miscue?
2. INTONATION. Is a shift in intonation involved in the miscue?
3. GRAPHIC SIMILARITY. How much does the miscue look like what was expected?
4. SOUND SIMILARITY. How much does the miscue sound like what was expected?
5. GRAMMATICAL FUNCTION. Is the grammatical function of the miscue the same as the grammatical function of the word in the text?
6. CORRECTION. Is the miscue corrected?
7. GRAMMATICAL ACCEPTABILITY. Does the miscue occur in a structure which is grammatically acceptable?
8. SEMANTIC ACCEPTABILITY. Does the miscue occur in a structure which is semantically acceptable?
9. MEANING CHANGE. Does the miscue result in a change of meaning? [RMI Manual, pp. 49-50].

Except for the first two, which are merely checked if there is an involvement, each question has three

possible answers. The spectrum for graphic and sound similarity is: High, Partial or None. The possibilities for grammatical function are: Yes, Indeterminate or No. For the last four questions, the possible answers are: Yes, Partial or No.

Then the answers to various questions were interrelated to produce patterns which give insight into how well the readers integrate the three cueing systems during reading. Patterns of correction, grammatical acceptability and semantic acceptability indicate the reader's sensitivity to and ability to use grammatical relationships. Patterns of correction, semantic acceptability and meaning change indicate his concern for and ability to reconstruct the intended meaning.

The retellings were then rated according to a prepared outline for each selection. Retelling of the story was evaluated on the basis of character analysis, recall of events, insight into the plot and theme. Retelling of the essay was evaluated on the basis of recall of specific happenings, items, instances or bits of information; generalizations which could be deduced from these; and abstraction of the major concepts (RMI Manual, p. 129). The particular outlines used for each selection in this study can be found in Appendix B. Alternate but

appropriate themes, plots, generalizations and concepts were fully accepted--as recommended by the RMI. The assigned points were totalled to obtain the Retelling Score.

Finally, a reader profile was prepared, bringing together all the data. Individual profiles for each subject in this study can be found in Chapter IV.

Selection of Miscues to be Coded

Goodman's (1973) study analyzed in depth only the first half of the first fifty miscues. Other researchers (Menosky, 1971) recommend the first fifty miscues as being adequate. However, this researcher found the discrepancies between scores too great to ignore. Quantity of miscues varied .19-2.11 MPHW for Poison and .07-.20 for Generation Gap. The Comprehending Scores varied as much as 17.9 percentage points for Poison and 6.2 for Generation Gap.

Which portion gives the truer picture of the reader's proficiency? It is indeed possible that boredom sets in for some readers during Poison. However, the scores of others improved as they progressed through the text. This variation held true for Generation Gap as well. Therefore, the total number of miscues were analyzed in this study. All scores are based on that

quantity unless otherwise stated.

Selection of Categories and Groups to Compare to Goodman's Study

Only those categories measured in the same manner by Taxonomy and RMI were compared: semantic and grammatical acceptability, MPHW, correction rates, word level substitutions, non-word substitutions, recall comprehension and a comprehending measure which does not consider meaning change. Only those groups which read the same selections were compared.

CHAPTER IV

FINDINGS

The results will be presented in the following manner. First, quantity of miscues will be considered. Next, the miscues will be evaluated in the light of each RMI question followed by the interrelationship patterns. Thirdly, the group findings will be summarized and individual profiles presented. Lastly, the data will be compared with the results of Goodman's (1973) study.

Quantity of Miscues

Table 2 shows the total number of miscues each subject generated while reading each selection.

TABLE 2

TOTAL NUMBER OF MISCUES

Selection	A	B	C	D	E	Mean
Poison	165	231	252	296	235	236
Generation Gap	85	78	126	80	49	84

A more meaningful comparison between readings can be made

by dividing the number of miscues by the total number of words and multiplying by 100, thus arriving at a figure which represents number of miscues per hundred words (MPHW). Table 3 shows MPHW generated by each subject while reading each selection.

TABLE 3

MISCUES PER HUNDRED WORDS (MPHW)

Selection	A	B	C	D	E	Mean
Poison	3.89	5.44	5.94	6.97	5.68	5.58
Generation Gap	6.16	5.64	9.18	5.78	3.57	6.07

If comparable effectiveness were based solely on quantity of miscues, the results would indicate that Subject A read most effectively, that Subjects D and E did better with Generation Gap than Poison, that C's reading of Generation Gap was the least effective and that there is little difference in story difficulty. However, the qualitative analysis using the RMI will suggest such conclusions are false.

RMI Evaluation

Nine RMI Questions

1. Dialect. Is a dialect variation involved in the miscue? Table 4 shows the percent of total miscues which involve dialect variation.

TABLE 4

DIALECT VARIATIONS

Selection	A	B	C	D	E	Mean
Poison	3.0	3.0	16.3	4.0	5.0	6.3
Generation Gap	0	0	1.6	0	0	—

Only C showed appreciable dialect variation and only in the easier reading. He persisted in using the present tense: 'he says' for 'he said,' 'he comes' for 'he came' in the manner of "street" narration. All of the subjects did this to a limited extent. Indeed, the text lent itself to this temptation. Written in the first person in a very informal manner, it actually lapsed into present tense itself a few times. Far from indicating serious misreading of the text, these miscues suggest a deep involvement with the story. Therefore, once dialect variation is checked, all other questions

are answered with this factor in mind. The question becomes: Is the miscue acceptable or understandable in the reader's dialect?

Other dialect variations were rejections by the readers of the author's British dialect. The following examples show the miscue which shall be called the observed response (OR) above the expected response (ER). All examples in this study will be presented in this manner:

OR: Please come around . . . .
ER: Please come round . . . .

OR: . . . whipping the sheet back quickly and . . . .
ER: . . . whipping the sheet back quick and . . . .

Dialect variation was non-existent in Generation Gap for all subjects except C, who exhibited the same tendency, minimally.

2. Intonation. Is a shift in intonation involved? Table 5 shows percent of total miscues involving intonation shift.

Many of the shifts in Poison were attempts to simplify the text, omitting conjunctions and determiners. Usually these were entirely acceptable syntactically and semantically. (Omissions are shown in parentheses.)

TABLE 5

INTONATION SHIFT

Selection	A	B	C	D	E	Mean
Poison	10.9	10.8	12.7	8.2	5.4	9.6
Generation Gap	8.5	5.0	3.2	8.3	12.2	7.4

OR: . . . so I bent down and removed the shoes. I left them . . . .
ER: . . . so I bent down and removed the shoes and left them . . . .

OR: Then it stopped moving (and) now it's lying there . . . .

Quotations in Poison were especially susceptible. Occasionally, they were syntactically acceptable; but the meaning was changed.

OR: "Look, Harry," he said. "No talking."
ER: "Look, Harry, he said no talking."

At other times, the intonation shifts left dangling clauses which were rarely overtly corrected. Usually they were at junctures which left the first part syntactically acceptable. The first example is from Poison; the second from Generation Gap.

OR: . . . speaking it carefully. --so as not to move the muscles . . . .

OR: . . . whether our children should be conscripted in the name of leaders. --who enjoy handing out medals to . . . .

Or sometimes a word was used differently than expected. This was more likely in Generation Gap. In the first example, the reader expected 'fault' to be a noun instead of an adjective; in the second example, he expected 'cash' to be a noun instead of a verb.

OR: . . . widened into a new national fault. --line rocking the entire country.

OR: . . . crown a Miss America with buck teeth, cash in Las Vegas . . . .

Intonation shifts were not quite as numerous in Generation Gap as in Poison, but they were far more disruptive.

3 and 4. Graphic and sound similarity. How much does the miscue look and sound like what was expected? Graphic and sound similarity can be determined only when a single word or non-word is substituted for a single text item. The figures in Tables 6 and 7, therefore, represent percent of total word level substitutions showing high, partial and no similarity.

In almost every case, the subjects' miscues had higher graphic similarity than sound similarity in each reading. However, without exception, more miscues showed high similarity, both graphic and sound, for Generation Gap than for the easier Poison. This, in spite of the fact that every subject generated more non-word

TABLE 6

GRAPHIC SIMILARITY

Rating	A	B	C	D	E	Mean
High						
Poison	63.2	39.2	63.1	43.8	42.4	50.3
G. G.	63.3	60.0	79.8	65.2	63.9	66.4
Partial						
Poison	19.2	25.5	20.4	34.6	24.8	25.3
G. G.	32.4	14.7	13.0	19.6	13.9	18.2
None						
Poison	17.6	35.3	16.5	21.6	32.8	24.4
G. G.	4.4	25.3	7.2	15.2	22.2	15.4

TABLE 7

SOUND SIMILARITY

Rating	A	B	C	D	E	Mean
High						
Poison	51.2	38.2	63.1	43.8	40.8	47.4
G. G.	51.5	50.0	80.3	54.4	58.3	58.9
Partial						
Poison	25.6	22.5	21.4	24.7	19.2	22.8
G. G.	42.6	25.3	10.6	34.8	19.4	27.9
None						
Poison	23.2	39.3	15.5	31.5	40.0	29.8
G. G.	5.9	24.7	9.1	10.8	22.5	13.2

substitutions for the former than for the latter. Table 8 shows the percent of total miscues which were non-word substitutions.

TABLE 8

NON-WORD SUBSTITUTIONS

Selection	A	B	C	D	E	Mean
Poison	7.8	1.3	3.2	0	4.1	3.3
Generation Gap	30.5	7.7	4.8	12.5	12.5	13.5

Most of the non-word substitutions had high similarity. Subject A, who had the highest percent of non-word substitutions, had the most miscues with high similarity for Poison and near the mean for Generation Gap.

Such substitutions as these were made for Poison ("$" denotes non-word in the RMI coding):

OR:	$mauray	$princh	$fivulous	$saurcam
ER:	malaria	prick	frivolous	sarcasm

The scores show the heavier concept load for Generation Gap. Even the scores of B and C are misleading because B omitted rather than attempted difficult words and C substituted many semantically unacceptable but grapho-phonemically similar words. Others did to a lesser extent. Non-word examples for Generation Gap are:

OR:	$cynian	$obstrictian	$resicute
ER:	cynicism	obstetrician	resuscitate
OR:	$pervaus	$stanity	$mortalen
ER:	pervasive	sanctity	mortician

Unacceptable real-word substitutions:

OR:	persuasive	obscenity	sanity
ER:	pervasive	obstinacy	sanctity
OR:	taboo	psychotic	precisely
ER:	tatoo	psychiatric	perceivingly

As Goodman (1973) concluded, the problem here does not seem to be a "phonics" one, but a conceptual one. Graphic-sound similarity was higher for Generation Gap in spite of the higher percent of non-word and anomalous real word substitutions.

5. Grammatical function. Is the grammatical function of the miscue the same as the grammatical function of the word in the text? Here again, this can be determined of word level substitutions only. Omissions, insertions and other type miscues do not figure in this category. Table 9 shows percent of word level substitutions which are identical to the text, indeterminate (can't be determined) or are different from the text in grammatical function.

These figures show the readers' intuitive use of grammatical restrictions. They do not show correction effects. Actually, many of those in the different

TABLE 9

GRAMMATICAL FUNCTION

Rating	A	B	C	D	E	Mean
Identical						
Poison	80.9	67.6	85.7	84.3	73.2	78.5
G. G.	73.8	75.8	79.0	86.4	77.7	78.8
Indeterminate						
Poison	5.6	4.9	3.8	0	4.0	3.7
G. G.	10.9	0	4.3	0	0	—
Different						
Poison	13.5	27.5	10.5	15.7	22.8	17.8
G. G.	15.3	24.2	16.3	13.6	22.2	18.0

category were corrected; and even before correction, they were usually syntactically acceptable with the preceding portion of the sentence, being corrected at the point of incongruency. In the following, the arrow shows the point at which the reader regressed to correct his miscue.

OR: . . . he's got a

ER: . . ©he's got one lying on his stomach.

Subjects B, D and E had a higher proportion of identical function substitutions for Generation Gap--the more difficult selection. Subject A substituted some non-words of ambiguous function: 'ultimative' for 'alternative,' 'crysa' for 'circa,' 'rethink' for

'rhetoric.' Subject C had trouble with verb modifiers, substituting: 'chronological' for 'chronologically,' 'electrostatic' for 'electrostatically.'

Still, these readers substituted words with identical grammatical function at least 73.8% of the time for the more difficult reading--in spite of the larger quantity of non-word substitutions. Most of the non-words suggested identical function by their form, indicating a strong sense of grammatical prediction within these readers.

6. Correction. Is the miscue corrected? Table 10 shows the percent of total miscues successfully corrected and the percent attempted but unsuccessfully corrected.

TABLE 10

CORRECTION RATES

Rating	A	B	C	D	E	Mean
Successfully Corrected						
Poison	19.3	20.5	17.9	16.7	28.4	20.6
G. G.	16.2	18.0	19.5	23.8	29.4	21.6
Unsuccessfully Corrected						
Poison	2.9	2.5	5.5	1.7	2.9	3.1
G. G.	2.3	2.6	8.3	1.2	0	2.9

The most striking observation is that the rates do not differ dramatically between the two readings in spite of the dramatic increase in semantically unacceptable miscues generated by every subject for Generation Gap. As a matter of fact, the correction rates of A and B drop slightly and Subject D's increase of 6.9% hardly compensates for a 21.7% drop in semantically acceptable miscues.

The reasons for this are not clear, but bear out Goodman's (1973) conclusions: miscues that are fully unacceptable semantically seem too difficult to correct. Often in Generation Gap, these miscues centered around non-word substitutions, which were rarely corrected.

On the other hand, the sense of syntactic anomaly was so strong that it was corrected in spite of non-word substitutions:

OR: They will know instrictively that
ER: They will know instinctively (C) what freedom is all about.

Examination of other examples shows how often syntactic anomaly is caught before the next word at the point of incongruity.

OR: . . . while he
ER: . . . while (C) we were . . . .

OR: . . . twitching of my muscles
ER: . . . twitching of the muscle--the one used for smiling.

OR: I could see the blue vein in his
ER: I could see the blue vein on the inside of Harry's forehead.

Semantic anomalies, however, which were not syntactically unacceptable were often not corrected:

OR: I must give him some protection, mustn't it?
ER: It must give him some protection, mustn't it?

Length of correction is an indicator of what syntactic level a reader functions on according to Goodman (1973). Subjects A and B rarely regressed more than one or two words, as in the examples above. Subjects C, D and E at times went back six to ten words.

OR: You don't want it to bite
ER: You know it won't bite unless it's frightened.

As shall be seen later when patterns of grammatical relationships are examined, very few of these subjects' corrections are cued by grapho-phonic anomaly. A mean of 4.0% of the corrections for Poison and 3.5% for Generation Gap are syntactically and semantically acceptable.

Lastly, it must be pointed out again that the extent of silent correction at this level is unknown. All discernible pauses were marked on the worksheets. Only

Subjects A, B and C had a significant quantity; and their purpose was not always clear. At times, the pauses were after a difficult section that had been read correctly. At times, they were before; and at other times, after an uncorrected miscue such as the following:

OR: Don't you listen to him Harry," (long pause) I said.
ER: "Don't you listen to Harry," I said.

Can we assume that the reader corrected silently?

7. Grammatical acceptability. Does the miscue occur in a structure which is grammatically acceptable? Table 11 shows percent of total miscues fully acceptable, partially acceptable and fully unacceptable. Partially acceptable means the miscue is acceptable only with prior or succeeding portions of the sentence, or within the sentence itself, not with the rest of the text.

According to Burke (1969), these figures which are before correction, might be considered a syntactic performance level. Note that although the percent of acceptable miscues drops for all subjects for Generation Gap, it does not do so dramatically. Notice also that E has no grammatically unacceptable miscues for the more difficult reading. The syntactic cueing system continues to operate at a high level through both readings.

TABLE 11

GRAMMATICAL ACCEPTABILITY

Rating	A	B	C	D	E	Mean
Fully Acceptable						
Poison	72.1	69.3	74.6	80.1	73.0	73.8
G. G.	59.8	65.4	70.6	73.8	69.0	67.8
Partially Acceptable						
Poison	26.1	27.2	23.4	17.2	23.7	23.5
G. G.	24.4	24.3	22.2	21.3	30.6	24.6
Unacceptable						
Poison	1.8	3.5	2.0	2.7	3.3	2.7
G. G.	15.8	10.3	7.1	5.0	0	7.6

8. Semantic acceptability. Does the miscue occur in a structure which is semantically acceptable? Table 12 shows percentage of total miscues fully acceptable, partially acceptable and fully unacceptable.

The semantic level of performance is much lower than the syntactic for both readings. The difference between percentage of grammatically acceptable and semantically acceptable miscues before correction for Poison ranges from 15.9-35.7%. The difference for Generation Gap ranges from 30.5-42.5%.

The rise in semantically unacceptable miscues for Generation Gap is dramatic for all except E. Good

TABLE 12

SEMANTIC ACCEPTABILITY

Rating	A	B	C	D	E	Mean
Fully Acceptable						
Poison	36.4	43.3	63.2	53.0	47.3	48.6
G. G.	18.3	34.6	34.9	31.3	32.7	30.3
Partially Acceptable						
Poison	43.6	48.0	27.9	39.9	41.9	40.9
G. G.	32.9	35.5	30.9	37.5	55.1	38.4
Unacceptable						
Poison	20.0	8.7	9.1	7.4	10.8	11.4
G. G.	48.8	29.9	34.1	31.4	12.2	31.3

correction strategies and a high proportion of partially acceptable miscues gives E the highest comprehension score. It is well to remember at this point that Goodman (1973) considered percentage of fully acceptable miscues before correction to be the single best indicator of reading proficiency. None of these students makes too many right guesses the first time.

9. Meaning change. Does the miscue result in a change of meaning? Table 13 shows percentage of miscues with no change, minimal change and extensive change before correction.

TABLE 13

MEANING CHANGE

Rating	A	B	C	D	E	Mean
No Change						
Poison	36.4	52.0	59.6	51.2	43.5	48.5
G. G.	14.1	29.5	30.9	26.3	30.6	25.0
Minimal						
Poison	33.3	29.8	22.3	25.1	25.0	26.7
G. G.	18.8	26.9	26.2	20.0	30.8	23.2
Extensive						
Poison	30.3	18.2	18.1	23.7	31.5	24.8
G. G.	67.1	43.6	42.9	53.7	38.6	51.5

As the figures show, each subject had some semantically acceptable miscues which did not reconstruct the intended meaning of the text. In many cases these were minimal:

OR: I took a quick pace forward; I couldn't help it.
ER: I took a quick pace backward; I couldn't help it.

At other times the extent of meaning change was questionable:

OR: . . . free ourselves of . . . the anxieties and status symbols . . . .
ER: . . . free ourselves of . . . the anxieties and vapid status symbols . . . .

Subject B had miscues in Poison which were not fully acceptable semantically but which showed no meaning

change: (Remember that all syntactically unacceptable miscues must be marked semantically unacceptable also.)

OR: Ganderbai sprung around.
ER: Ganderbai sprang around.

OR: . . . speaking more slowly than ever. . . .
ER: . . . speaking more slowly than ever now and so softly . . . .

Finally, it is well to note that partial semantic acceptability often resulted in extensive meaning change.

Retelling Score

This comprehension measure gives insight into the reader's ability to interrelate, interpret and draw conclusions from the content. Sometimes, too, it reveals aspects of the silent reading process that were not clearly evident in oral reading. The figures in Table 14 represent the percentage of outline points recalled for each selection.

TABLE 14

RETELLING SCORES

Selection	A	B	C	D	E	Mean
Poison	50	62	61	69	57	60
Generation Gap	26	45	41	40	53	41

Most subjects were able to retell most of the details in Poison in sequence and to feel the movement of plot. The theme of prejudice was missed by all, but credit was given to such alternative themes as (1) it showed 'what a man will go through to avoid death,' or (2) 'how differently a man acts toward another while he is useful to him.' Character assessments were only fair. All except E knew that the krait was a snake, although only D pronounced it correctly.

When retelling Generation Gap, none except E was able to recall even the details well, let alone organize them in any coherent fashion to form generalizations or a major concept. The rhetorical device of negative discard confused their understanding as to whether the present gap will eventually disappear. The reason why we need a gap was partially seen by only one subject.

The abundance of difficult words discouraged most of them. All felt they might have understood it better if they 'had known what all those words meant.'

RMI Interrelationships

Comprehension. This second measure of comprehension is a process measure. It is obtained by examining the interrelationship of correction, semantic acceptability and meaning change for each miscue.

Twenty-seven patterns are possible. They sort into three categories: No Loss of Comprehension, Partial Loss or Loss. In the patterns which indicate no loss, there has been no meaning change as a result of the miscue. This category contains all successfully corrected miscues as well as those which originally showed no meaning change. Partial Loss includes all those which caused minimal change, and Loss contains the most disruptive miscues.

The figures in Table 15 represent percentage of total miscues showing No Loss of Comprehension, Partial Loss and Loss.

TABLE 15

COMPREHENSION

Category	A	B	C	D	E	Mean
No Loss						
Poison	49.4	64.1	68.1	60.1	67.3	62.1
G. G.	27.0	46.2	42.9	46.0	59.2	44.3
Partial Loss						
Poison	24.9	21.6	16.0	24.3	17.4	20.6
G. G.	11.8	I6.7	18.3	12.8	24.5	17.3
Loss						
Poison	25.7	14.3	15.9	15.6	15.3	17.3
G. G.	61.2	37.2	38.8	41.2	16.3	38.4

Only the scores of D and E show any appreciable

discrepancy between Retelling scores and Comprehension. D's Retelling score for Poison is closer to his Comprehension score on the first fifty miscues. His concern for accuracy dropped considerably as he progressed through the text. It is possible that he was able to gain deep structure without bothering to reproduce surface structure.

On the other hand, E showed high concern for surface accuracy, regressing often to repeat and correct at a much higher rate than the others. Yet, his Retelling score was lower than his Comprehension. He was the only subject not completely sure about the krait. Was it an insect or a snake? He also confused who said and did what at times. However, for Generation Gap, even though his Retelling score was lower than his Comprehension, both scores were higher than any other subject's.

It is assumed that this comprehension measure provides insight into the reader's on-going concern for meaning and his success in producing meaningful structures. Comprehension gets closer to underlying competence because it is based on the oral reading process itself, according to Goodman (1973). Even so, it has limitations. (1) It does not measure the silent correction phenomenon which Menosky (1971) claims increases

with age and proficiency. (2) It is related to loss of meaning only in terms of miscues actually made by the reader. The comprehending patterns only attempt to answer the question: When the reader does produce a miscue, how disruptive of meaning is it? (Goodman & Burke, 1972.) Therefore, both the Retelling score and Comprehension patterns must be considered. A higher Retelling score detects the reader who either does much silent correcting or can gain deep structure without surface accuracy. Conversely, a lower Retelling score will detect the reader who is more concerned about surface accuracy than meaning.

Grammatical relationships. Insight into the interaction of the syntactic and semantic cueing systems can be gained by examining the interrelationship patterns of syntactic acceptability, semantic acceptability and correction. The patterns formed group the miscues into four categories: Strength in using grammatical relationships, Partial Strength, Weakness and Overcorrection. Those in the Strength category have both syntactic and semantic acceptability or are corrected. Those in Partial Strength have only syntactic acceptability. Those in the Weakness category have neither. The last category, Overcorrection, contains those miscues which

were corrected in spite of syntactic and semantic acceptability.

The figures in Table 16 represent percentage of total miscues showing Strength in using grammatical relationship, Partial Strength, Weakness and Overcorrection.

TABLE 16

GRAMMATICAL RELATIONSHIPS

Category	A	B	C	D	E	Mean
Strength						
Poison	45.9	59.6	67.9	62.8	67.7	60.8
G. G.	20.9	43.6	42.9	45.0	53.1	41.1
Partial Strength						
Poison	32.6	17.9	13.9	24.3	19.4	21.7
G. G.	45.4	25.6	30.9	35.0	26.5	32.7
Weakness						
Poison	16.1	18.9	13.3	10.2	8.2	13.5
G. G.	30.2	26.9	22.2	16.3	16.3	22.7
Overcorrection						
Poison	5.4	3.6	4.9	2.7	4.7	4.0
G. G.	3.5	3.9	4.0	3.7	4.1	3.5

The figures for Poison will be examined more closely first.

The Strength category contains those miscues which were both syntactically and semantically acceptable originally or were corrected. Such miscues as the following

show strength:

OR: "There, see, it's still there."
ER: "See it, it's still there."

OR: . . . the visible part gradually grew shorter.
ER: . . . the visible part grew gradually shorter.

OR: He walked past me across the balcony.
ER: He walked on past me across the balcony.

OR: "All right, Harry," I said, now I'm whispering too.
ER: "All right, Harry," I said, and now I'm whispering too.

The Partial Strength category contains all miscues which were syntactically acceptable but semantically unacceptable and uncorrected. Therefore, the miscues in this category show that the readers were still using the grammatical cueing system--but no longer integrating it with the semantic.

OR: "That way he'll look at me and tell me if I . . . ."
ER: The way he looked at me told me I . . . .

OR: The light wouldn't frighten me.
ER: The light would frighten him.

Such examples are typical of Poison in which there are only four characters--three men and a snake. The overabundance of similar pronouns and frequent cueing from the peripheral text causes confusion particularly when a shift in action or direction of thought is not predicted. For instance, immediately before the first example just given, Harry had asked,"Why don't you get a

doctor?" The reader continued the train of thought in Harry's question instead of shifting to the narrator's reaction to that question, as did the text.

In some cases, both syntax and meaning were destroyed. These miscues make up the Weakness category. Miscues which are not syntactically acceptable cannot be labelled semantically acceptable, since the premise is that syntax is a vehicle for meaning.

OR: . . . so I beamed wouldn't swing through the window.
ER: . . . so the beam wouldn't swing in through the window.

OR: Though it would go out the top of the sheet.
ER: Thought it would go over the top of the sheet.

The Overcorrection category contains those miscues which were fully acceptable and yet corrected. It contains an insignificant quantity of miscues for each subject. Thus, we can say that even in the case of Subject A, whose reading seemed to be a close, word-by-word process, the grapho-phonic system did not take precedence over the syntactic-semantic cueing systems.

In summary, the results show that 81.1-91.8% of the miscues for Poison were syntactically acceptable after correction. These figures are derived from adding the miscues showing Strength, Partial Strength and Overcorrection. According to Burke (1969), they suggest the

level of syntactic competence as compared to performance. Only a portion of these miscues were semantically acceptable--those in the Strength and Overcorrection columns. Semantic competence is shown in only 51.3-71.8% of the miscues.

An in depth examination of the figures for Generation Gap reveals a different picture. Every subject shows a decrease in Strength--a mean drop of 17.7%. These examples show that the subjects could still manipulate the text successfully at times:

OR: The first priority. . . will be the reincarnation of the . . . .
ER: The first priority . . . will be to reincarnate the . . . .

OR: . . . then we'll really have only begun.
ER: . . . then we will have only begun.

However, a major portion of the miscues shift to the Partial Strength category, indicating that the readers continue to use the grammatical cueing system, but were no longer able to integrate it with the semantic.

OR: He envisions . . . troublemakers saving their beards, dropping their hips . . . .
ER: He envisions . . . troublemakers shaving their beards, dropping their hems . . . .

OR: . . . will know insignificantly what freedom is all about.
ER: . . . will know instinctively what freedom is all about.

OR: . . . stop using age as an excuse for obscenity.
ER: . . . stop using age as an excuse for obstinacy.

OR: . . . debate between the obsensian and mortalan will end.
ER: . . . debate between the obstetrician and mortician will end.

OR: Egging can no longer be an excuse for stragnation.
ER: Aging can no longer be an excuse for stagnation.

OR: For once we have begun . . . , we will have a start looking inward.
ER: But once we have begun . . . , we will have to start looking inward.

OR: . . . must resooticate . . . environment, and go down together.
ER: . . . must resuscitate . . . environment, or go down together.

These miscues are all syntactically acceptable. The first three examples show the substitution of real words that make no sense in light of the concept being discussed. The next two show the substitution of non-words; a miscue accounting for 4.8-30.5% of the total in Generation Gap. The sixth and seventh examples indicate a problem with the significance of function words in controlling thought direction in an argumentative essay.

The other half of the miscues drop into the Weakness category.

OR: . . . must ( ) a physical and moral deplated environment . . . .
ER: . . . must resuscitate a physically and morally depleted environment . . . .

OR: Plan to ( ) can no longer the country.
ER: "Planned obsolescents" can no longer run the country.

OR: . . . all the constricts of the mind that binds us.
ER: . . . all the constraints of the mind that bind us.

OR: . . . force the youth to stop fighting for a future that wants . . . and begins to accept . . . .
ER: . . . force the youth to stop fighting for a future they want . . . and begin to accept . . . .

The first three examples show the snowballing influence of weak word concepts. The subject found it too difficult to reconstruct the meaning, to pick up the pieces. Example one may also indicate a problem which occurred with most of the subjects concerning a complex noun phrase. He was expecting 'depleted' to be a noun. Interestingly enough, he was able to capture the syntactic form of 'depleted,' perhaps graphically. Still, full recovery was impossible because now the context clues were insufficient. Context clues in Generation Gap are very weak, because of the heavy use of simile, metaphor and other rhetorical devices.

The last two examples show another problem typical of Generation Gap: verb agreement. In the third example,

the unknown word may have redirected the reader's eye to 'mind.' In the fourth, the complexity was responsible--the insertion of 'that' was instinctively called for; but 'they' was dropped, and 'future' became the subject of the clause.

Finally, we note that the Overcorrection category remains about the same. The fact that it is still insignificant is doubly interesting in light of the greater reliance each subject seemed to place on grapho-phonemic cues when reading Generation Gap.

The results for Generation Gap suggest that the syntactic cueing system was functioning competently for 69.8-83.7% of the miscues, but the semantic for only 24.4-57.2%.

Types of Miscues

The RMI does not analyze the miscues as to type, yet the coding sheet provides the opportunity to determine four categories: word level substitutions, omissions, insertions and others (multiple word miscues, reversals, intonation and successive related). Goodman (1973) claims that omissions, insertions and other types indicate a higher level of processing syntax and meaning and notes a developmental trend; namely, that more proficient readers produced fewer word substitutions and

more miscues of other types. Observe Table 17 which shows percentage of each type miscue.

TABLE 17

TYPES OF MISCUES

Types	A	B	C	D	E	Mean
Word-for-Word Substitutions						
Poison	75.9	44.2	41.7	30.1	52.8	49.0
G. G.	81.7	42.3	56.3	55.0	73.5	62.0
One-Word Omissions						
Poison	6.1	27.3	20.6	23.3	24.4	19.9
G. G.	4.9	34.6	19.8	17.0	10.2	17.2
One-Word Insertions						
Poison	7.3	12.9	10.7	13.2	9.1	10.6
G. G.	3.7	14.1	12.7	13.0	4.1	9.4
Others						
Poison	10.7	15.6	27.0	33.5	15.7	20.5
G. G.	9.8	9.0	11.2	15.0	12.2	11.4

Subject A had the highest percentage of word-for-word substitutions during both readings. His manner of reading was slow and deliberate exhibiting the kind of word level reading the RMI analysis indicates. Subject D, on the other hand, manipulated the text quite freely.

OR: You don't really mean that the krait is lying on your stomach.
ER: You don't really mean there's a krait lying on your stomach.

These were not always semantically acceptable, unfortunately.

OR: "First thing I tried to do was get some serum into him."
ER: "First thing is to try to get some serum into him."

Every subject's word level substitutions increased for Generation Gap, except B's. He omitted difficult vocabulary words instead of substituting non-words--a process which also indicated closer word-by-word following of the text.

Summary of Findings

Every reader generated a sizable quantity of miscues for both selections: 3.89-6.97 MPHW for Poison and 3.57-9.18 MPHW for Generation Gap.

A large portion of these were fully acceptable after correction, showing no comprehension loss. The percentage varied between readers and with selections. Four of the readers produced 60.1-68.1% fully acceptable miscues when reading Poison. Even the least proficient reader produced 49.4%. When reading Generation Gap, the proportion dropped and the range widened: only 27.0-59.2% showed no comprehension loss. The proportion of miscues

indicating extensive comprehension loss increased from 14.3-25.7% to 16.3-61.2%.

For Poison, before correction, grammatical acceptability ranged from 69.3-80.1%, graphic similarity 39.2-63.2% and sound similarity 38.2-63.1%, semantic acceptability 36.4-63.2%, no meaning change 36.4-59.6%.

During the more difficult reading, Generation Gap, grammatical acceptability dropped slightly to 59.8-74.8%, graphic and sound similarity rose to 60.0-79.8% and 50.0-80.3%, respectively; semantic acceptability and meaning change dropped markedly to 18.3-34.9% and 14.1-30.9%, respectively. According to Burke (1969), these before correction figures might be called performance levels.

Figures 1 and 2 picture how differently the grapho-phonemic, syntactic and semantic cueing systems functioned during each reading. They compare ranges and means of percentage of miscues with full grammatical and semantic acceptability, and high graphic and sound similarity.

Word level substitutions accounted for 30.1-75.9% of the miscues for Poison, but 42.3-81.7% for Generation Gap, indicating much closer reading of the text. Predicting ability was high for Poison: 67.6-85.7% of the substitutions had identical grammatical function to the text.

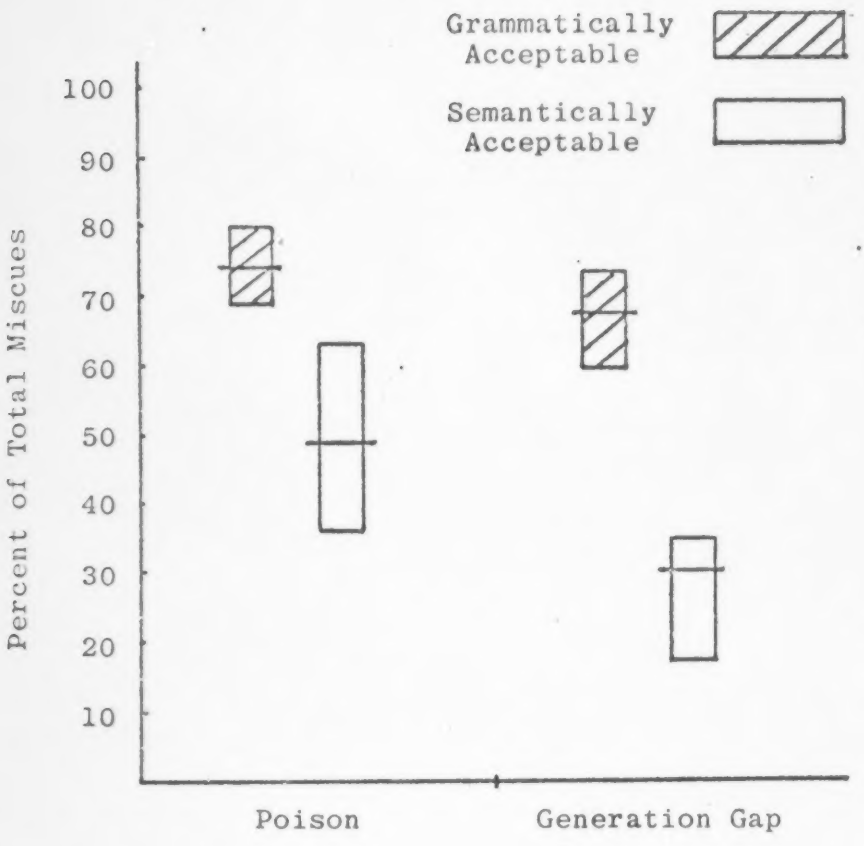

Fig. 1. Performance levels: syntactic and semantic cueing systems. Each bar shows range and mean ; N=5.

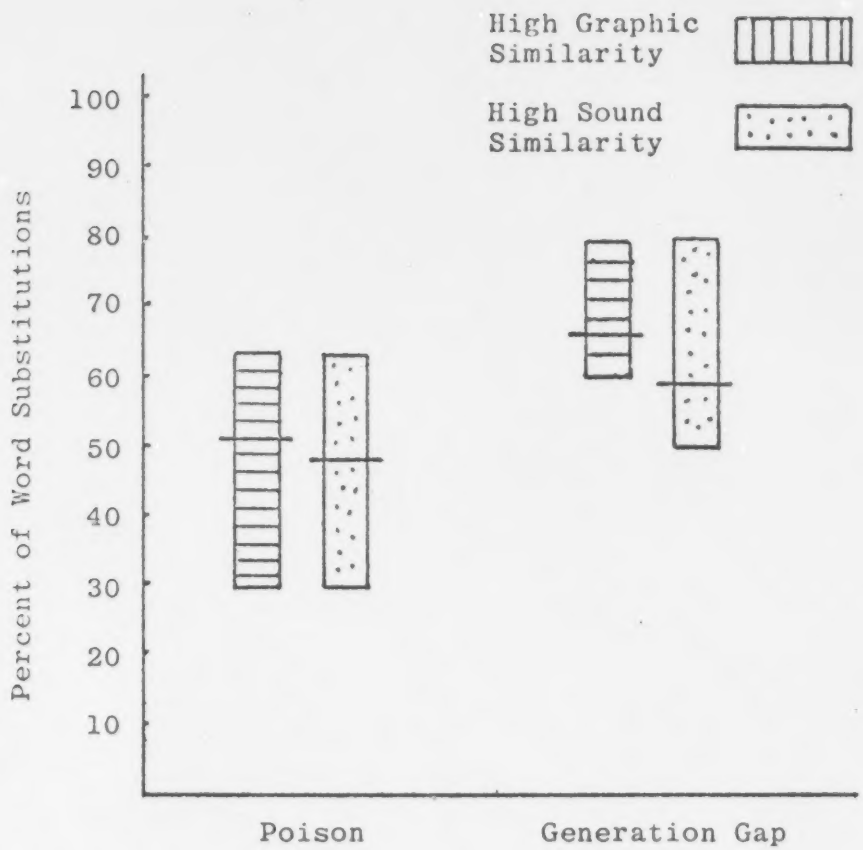

Fig. 2. Performance level: grapho-phonemic cueing system. Each bar shows range and mean ; N=5.

But it was even higher for Generation Gap: 73.8-86.4% had identical function. Some of these substitutions were non-words of high grapho-phonic similarity and identical grammatical function. These accounted for 0-7.8% of the miscues for Poison and a much higher 7.7-30.5% for Generation Gap.

The 5.4-12.7% of miscues involving intonation variations for Poison rarely disrupted meaning. In Generation Gap, the 3.2-12.2% were more destructive. There were few dialect variations. Those miscues dropped from 3.0-16.3% for Poison to 0-1.6% for Generation Gap, indicating again closer reading of the text by all subjects.

Correction rates ranged from 16.7-28.4% for Poison and 16.2-29.4% for Generation Gap. Subject E had the highest rate in both selections. Only three subjects had higher rates for Generation Gap in spite of the much larger portion of unacceptable miscues. The low percentage of fully acceptable miscues corrected -- 2.7-5.4% for both selections--indicates that most corrections were not cued by grapho-phonic anomaly alone.

For these particular subjects, quantity did not seem to correlate with quality. Subject A, who had the fewest miscues for Poison, had the lowest Comprehension

and Retelling score. C had the highest portion for Generation Gap, yet the quality of these and his Retelling score were near the group mean. Mean MPHW does not vary much between the two readings, yet both mean Comprehension and mean Retelling scores drop 20%.

Individual Profiles

Subject A

In Table 18, Subject A's scores present a strikingly unique profile atypical of this group of junior college readers. He generated far fewer miscues (3.89 MPHW) than any of the others for Poison, but only 49.4% of them showed no loss in Comprehension; and his Retelling score was 50%, both the lowest of the group. His memory for details was quite good, but his character analyses and insight into the theme were very strange. (Harry was laughing the whole time. "You shouldn't joke about serious matters.") In contrast, his MPHW for Generation Gap was second to highest (6.22) and only 25.9% of these showed no Comprehension loss. The Retelling score dropped to 26%. Again, both scores were far lower than any other subject's. His memory for details was poor as well as his understanding of major concepts. "The author wanted to show us there was nothing anybody could do to stop the gap, so stop the talk!"

TABLE 18

SELECTED RMI SCORES FOR SUBJECT A

Areas	Poison	Generation Gap
Comprehension		
No Loss	49.4	27.0
Partial	24.9	11.8
Loss	25.7	61.2
Retelling Score	50.0	26.0
Grammatical Relationships		
Strength	45.9	20.9
Partial	32.6	45.4
Weakness	16.1	30.2
Overcorrection	5.4	3.5
Graphic-Sound Similarity		
High	63.2-51.2	63.3-51.5
Partial	19.2-25.6	32.4-42.6
None	17.6-23.2	4.4- 5.9

Strength in using grammatical relationships was shown in 45.9% of his miscues for Poison but in only 20.9% for Generation Gap. Half of these miscues dropped from the Strength category to only the Partial Strength showing that 69.5% of his miscues were still syntactically acceptable.

However, semantic acceptability dropped dramatically for Generation Gap. He had the highest quantity of non-word substitutions for both selections: 7.8% for

Poison increasing to 30.5% for Generation Gap--more than twice the next nearest score. His correction rate for Poison was 19.3% (close to the mean) but his rate for Generation Gap dropped to 16.2% (the lowest for the group).

His word level substitutions had the highest graphic similarity for Poison, but below the mean for Generation Gap. Still, graphic similarity remained high in spite of the larger quantity of non-word substitutions. The majority of these, as well as the other word level substitutions were grammatically identical in function to the text.

These findings, plus the fact that over 75% of his miscues in Poison and over 81% in Generation Gap were word level substitutions, indicate that this subject was doing far closer word-by-word reading than any of the others. He read very slowly in a jerky, expressionless manner. It took him three times as long as Subject D to finish Poison. He interjected "Uh" an average of every 30 words, sometimes before more challenging words and phrases; sometimes after, as if checking his decision; or at still other times following a miscue which was left uncorrected.

It would seem that Subject A has serious reading

difficulties. He seems to exhibit very unproductive strategies using far more graphic, syntactic and semantic information than he needs, only to lose much of the potential meaning in the end. Correction strategies were ineffective: semantic acceptability before correction was 18.3% for Generation Gap, rising to only 20.9% after correction. Very weak word concepts contributed greatly to his problem.

Subject B

Table 19 shows that Subject B generated 5.44 MPHW while reading Poison, close to the group mean. A large portion of these showed no comprehension loss. When reading Generation Gap, he generated 5.64 MPHW, of which only 46.2% showed no loss--the bulk falling into the Loss category. Retelling scores were close to comprehension. He remembered details in an orderly fashion and was able to put some together to form generalizations. He saw the theme of Poison as "Ingratitude," which received some credit; but he missed the main point of why we need a generation gap. He said, "That's life."

Strength in using grammatical relationships was shown in 59.6% of his miscues for Poison, but in only 43.6% for Generation Gap. Half of the decrease fell into the Partial Strength category showing that B continued to

TABLE 19

SELECTED RMI SCORES FOR SUBJECT B

Areas	Poison	Generation Gap
Comprehension		
No Loss	64.1	46.2
Partial	21.6	16.7
Loss	14.3	37.2
Retelling Score	62.0	45.0
Grammatical Relationships		
Strength	59.6	43.6
Partial	17.9	25.6
Weakness	18.9	26.9
Overcorrection	3.6	3.9
Graphic-Sound Similarity		
High	39.2-38.2	60.0-50.0
Partial	25.5-22.5	17.7-25.3
None	35.3-39.3	25.3-24.7

produce syntactically acceptable miscues without processing intended meaning. However, B had the largest portion of miscues in the Weakness category for Poison and next to the largest for Generation Gap. In addition, he had the lowest proportion of substitutions with identical grammatical function for Poison (67.6%) and next lowest (75.8%) for Generation Gap. Either B's sense of syntax is not as strong as other readers in this group (with the exception of A) or he does more silent

correcting, or possibly he is able to get to deep structure without such concern for surface structure.

B's processing of meaning for Generation Gap was hampered by weak word concepts also, but B preferred to omit them rather than substitute non-words. Non-word substitutions amounted to only 1.3% for Poison, and 7.7% for Generation Gap. However, 27.3% of his miscues were omissions in the former; and 43.6% were in the latter (over twice the mean). Such words as 'frivolous,' 'oppressive,' 'caperings' were omitted in Poison; 'asphyxiate,' 'obsolescents,' 'circa,' 'sanctuary,' 'sanctity,' 'technocrat' were typical omissions in Generation Gap. According to Goodman (1973) such behavior is not typical of older readers, who usually substitute non-words rather than omit difficult words. One wonders if this is a result of early training, in which accuracy was considered paramount and guessing discouraged.

Such accuracy is not manifest in his graphic-sound scores for Poison or in his rather free manipulation of the text. Many of his miscues involved omission of the conjunction "and," leaving perfectly acceptable, formalized structures. This was an obsession for B--to simplify those compound sentences.

B's correction rate was 20.6% for Poison, close to the mean, and 18.0% for Generation Gap, below the mean. Miscues were rarely recovered after two words. B's reading was stiff and formal; he did not seem relaxed or comfortable with the written word.

Subject C

Table 20 indicates that Subject C generated 5.94 MPHW for Poison, slightly above the mean, and 9.18 MPHW for Generation Gap, well above the mean and highest for this group. Of the former, 68.1% showed no comprehension loss; but of the latter, only 42.9% showed no loss. His Retelling score was somewhat below the Comprehension score for Poison. He commented about the tedium of details and his boredom. His insight into the characters was curious: the Hindu doctor was nasty and arrogant. He described the theme as "three men against death," for which he received credit. He understood that the generation gap was an ideological one, but he was not sure why we need one or whether it will go away. Memory for details in this second selection was only fair.

Subject C showed the highest strength in using grammatical relationships for Poison and about the mean for Generation Gap. A large portion of these miscues in Generation Gap fell into the Partial Strength category,

TABLE 20

SELECTED RMI SCORES FOR SUBJECT C

Areas	Poison	Generation Gap
Comprehension		
No Loss	68.1	42.9
Partial	16.0	18.3
Loss	15.9	38.8
Retelling Score	61.0	41.0
Grammatical Relationships		
Strength	67.9	42.9
Partial	13.9	30.9
Weakness	13.3	22.2
Overcorrection	4.9	4.0
Graphic-Sound Similarity		
High	63.1-63.1	79.8-80.3
Partial	20.4-21.4	13.0-11.6
None	16.5-15.5	7.2- 9.1

so that 77.3% of his miscues were still grammatically acceptable in spite of weak semantic cues. His intuitive ability to predict grammatical structure is further confirmed by a high percentage of identical function substitutions in both selections: 85.7 and 79.0%. Many of the semantic difficulties in Generation Gap were word concepts; but instead of substituting non-words or omitting them, C had the tendency to substitute real words which made no sense: 'perceivably' for 'precisely,'

'dissenters' for 'dissidents,' 'sanity' for 'sanctity,' 'rapid' for 'vapid.' These usually had high graphic sound similarity to the text and identical grammatical function.

His correction rate was 17.9% for Poison and 19.5% for Generation Gap, both below the mean; but his correction strategies were rather striking. He sometimes went back ten words and made as many as five attempts. Such strategy indicates C's deep involvement in the text. Further indication of this was his high percentage of dialect variation for Poison; involving 16.3% of his miscues. They consisted of substituting the present tense in the manner of oral narration. Concentration on producing the exact text was much greater during Generation Gap, as the increase from 41.7% word substitutions to 56.3% indicates. Closer attention was paid to grapho-phonemic and syntactic cues, yet the semantic problems were too great and meaning could not be processed in more than 42.9% of the miscues.

Subject D

Table 21 shows that Subject D generated 6.97 MPHW (the highest quantity) for Poison and 5.78 MPHW (somewhat below the mean) for Generation Gap. Of the former, 60.1% showed no comprehension loss; of the latter, only 46.0%

TABLE 21

SELECTED RMI SCORES FOR SUBJECT D

Areas	Poison	Generation Gap
Comprehension		
No Loss	60.1	46.0
Partial	24.3	12.8
Loss	15.6	41.2
Retelling Score	69.0	40.0
Grammatical Relationships		
Strength	62.8	45.0
Partial	24.3	35.0
Weakness	10.2	16.3
Overcorrection	2.7	3.7
Graphic-Sound Similarity		
High	43.8-43.8	65.2-54.4
Partial	24.8-24.7	13.9-34.8
None	32.8-31.5	22.2-10.8

showed no loss. D's Retelling score was much higher than his Comprehension score for Poison--closer to the results on his first fifty miscues. The quality of his miscues decreased as he progressed past the first part of the text. He read very fast with only 30.1% word-for-word substitutions, most of the miscues involving multiple word manipulations of the text. Of all the subjects, D seemed least concerned with reproducing the text.

In Retelling, he had excellent memory for details,

and the most perception into theme possibilities for Poison. His ability to deal with Generation Gap, however, was no better than B's or C's. He missed the larger concept of why we need a gap and only grasped well the generalization concerning the different nature of the next gap.

His strength in using grammatical relationships was close to the mean for both selections, dropping considerably for Generation Gap. So many of the miscues dropped into the Partial category, however, that his overall score on syntactical acceptability after correction was the highest of the group for both selections: 89.8% for Poison; 83.7% for Generation Gap. Syntax control is further indicated by his high percentage of identical function substitutions (84.3 and 86.3%), highest for the group for Generation Gap. This high syntactical acceptability score is interesting considering his large number of multiple word miscues and his low concern for grapho-phonemic similarity. This subject seems to be operating on a higher level of dealing with structure. Unfortunately, he was not too successful at processing meaning, even in Poison. An even closer reading of the text during the second reading, as indicated by fewer miscues, higher graphic-sound similarity, more word level

substitutions (55.0%), higher syntactic accuracy of those substitutions, as well as a higher correction rate (23.5%) for Generation Gap compared to 16.7% for Poison), still could not compensate for the weak semantic cues. Non-word substitutions accounted for 12.5% of the miscues, compared to zero for Poison. D's higher vocabulary score on the Nelson-Denny did not seem to make a difference here.

Subject E

Table 22 shows that Subject E generated 5.68 MPHW for Poison (close to the group mean); however, he generated the fewest for Generation Gap, 3.57 MPHW. In the easier selection, 67.3% of the miscues showed no comprehension loss--well above the group mean; and in the more difficult selection, 59.2% showed no loss--far higher than any other subject. Most of his other miscues fell in the Partial Loss category in contrast to the other subjects whose miscues dropped from No Loss all the way down to Loss. Obviously, this subject is able to handle the more difficult reading more effectively than the others. This is further confirmed by his Retelling score which, although lower than Comprehension, is still the highest for the group. The major concepts were quite well developed and most details remembered. All

TABLE 22

SELECTED RMI SCORES FOR SUBJECT E

Areas	Poison	Generation Gap
Comprehension		
No Loss	67.3	59.2
Partial	17.4	24.5
Loss	15.3	16.3
Retelling Score	60.0	53.0
Grammatical Relationships		
Strength	67.7	53.1
Partial	19.4	26.5
Weakness	8.2	16.3
Overcorrection	4.7	3.5
Graphic-Sound Similarity		
High	42.4-40.8	63.9-58.3
Partial	24.8-19.2	13.9-19.4
None	32.8-40.0	22.2-22.5

generalizations were missed except that concerning the nature of the next gap. E wanted to fill in his own ideas and obviously was well-versed on the topic. Possibly this knowledge contributed to his higher comprehension score--a point for further investigation.

His success with Poison, however, was not notable. The Retelling score was well below Comprehension. He confused two of the main characters and was not sure about the krait. Was it a snake or insect? (No other

subject had this difficulty.) Important details were missed, and he could see no purpose to the story beyond the suspense. It appears that Subject E was more concerned with surface accuracy than meaning. His long years of remedial training may have contributed to this. He admitted to a facility for sounding out words without knowing what they meant.

Subject E's miscues indicated high strength in using grammatical relationships. Word level substitutions accounted for 52.8% of his miscues in Poison, but 73.5% for Generation Gap. These levels are second only to A's. Their graphic-sound similarity increased dramatically for Generation Gap indicating much closer reading of the text. He regressed frequently, sometimes to reread an unusual construction, sometimes to correct, sometimes for no obvious reason. His correction rate was the highest of any subject's: 28.4% for Poison and 29.4% for Generation Gap. His ability to recover semantic anomaly can be seen by comparing semantic acceptability before correction (32.7%) and after (59.2%). This was a much greater jump than any other subject made. E's strategies were more productive and effective though they may not have been particularly efficient.

Comparison with Goodman's (1973) Study

Poison was read by low average (LA), high average (HA) and high (H) tenth graders, as well as high eighth graders and the selected group of junior college readers in this study (J. C.). Selected psycholinguistic categories are compared in Table 23. All figures except MPHW and Retelling represent group mean percentage of total miscues.

TABLE 23

COMPARISON OF GROUP MEANS: POISON
JUNIOR COLLEGE, TENTH AND
EIGHTH GRADERS

	J. C.	10H	10HA	10LA	8H
MPHW	5.6	2.1	3.3	5.1	3.0
Retelling	61.0	51.8	44.8	34.8	40.7
Comprehension*	64.8	77.3	81.4	75.3	79.4
Semantic Acceptability	47.8	69.8	65.8	56.0	66.4
Syntactic Acceptability	73.9	77.2	78.5	72.4	79.1
Correction	20.6	17.4	32.7	30.4	21.4
Word Level Substitutions	49.0	47.3	64.6	64.7	51.8
Non-Word Substitutions	3.3	3.8	5.9	7.1	6.9

*Percentage of semantically acceptable miscues after correction.

Generation Gap was read by those same groups in addition to low proficiency tenth graders (10L).

TABLE 24

COMPARISON OF GROUP MEANS: GENERATION GAP
JUNIOR COLLEGE, TENTH AND EIGHTH GRADERS

	J. C.	10H	10HA	10LA	10L	8H
MPHW	6.1	3.0	5:7	7.7	13.2	4.4
Retelling	41.0	43.0	37.0	18.6	17.2	27.5
Comprehension*	45.1	70.0	50.5	43.6	22.3	59.0
Semantic Acceptability	30.3	54.4	36.1	37.8	14.4	50.5
Syntactic Acceptability	67.8	80.3	66.3	61.0	42.7	73.5
Correction	21.6	24.4	21.7	21.0	9.7	15.1
Word Level Substitutions	62.0	59.2	74.9	74.7	81.6	62.3
Non-Word Substitutions	13.5	19.7	21.3	26.0	32.4	23.8

*Percentage of semantically acceptable miscues after correction.

It is worth remembering, at this point, that the group of junior college readers selected for this study all placed below the fiftieth percentile in the SRA Junior College Placement Test and below the fortieth in

the Nelson-Denny Reading Test Form A. Where this places them as far as reading proficiency is concerned in comparison to the general population of 17-18 year olds is not clear. Their MPHW and Syntactic Acceptability were roughly comparable to the average groups, but they scored considerably lower than any of these groups for Comprehension and Semantic Acceptability for Poison; closer to 10LA for Generation Gap. Retelling Comprehension and Word Level Substitutions were closer to the two high proficiency groups. The most startling difference was percentage of Non-Word Substitutions for Generation Gap, which was far lower than for any other group.

CHAPTER V

SUMMARY, CONCLUSIONS AND DISCUSSION

Summary

The purpose of this study was to extend Goodman's theoretical framework as assessed by the RMI to the junior college level. Descriptive in nature, it analyzed and compared the oral reading miscues of a selected group of junior college readers when reading two passages of varying difficulty and in relation to the eighth and tenth graders in Goodman's (1973) longitudinal study who read the same selections. Two questions were asked: Does this group of junior college readers use a process consistent with the Goodman Model of Reading? How do they compare with the eighth and tenth graders in the way in which they handle grapho-phonemic, semantic and syntactic cues to get to meaning?

Conclusions

In general, the predictive and explanatory powers of the Goodman Model were confirmed. Reading for these subjects was not a precise, sequential perception of words. All readers constructed the text, producing many

variations from it. A large portion of these variations were fully acceptable, reproducing its intended meaning. Even the least proficient readers, during the easier reading, produced fully acceptable miscues 50% of the time.

The functioning and interaction of three cueing systems was evident: grapho-phonemic, syntactic and semantic. Their functioning and interaction differed with reading proficiency and between reading selections.

The controlling nature of the syntactic was evident in the easier reading. In the more difficult reading, grapho-phonemic cues were more carefully attended to; and although syntactic cues did not function so well, they were still much more effective than semantic cues. As a result, these subjects were still able to produce a high proportion of syntactically acceptable miscues, containing non-words or real words of high graphic and phonemic similarity and identical grammatical function--many of which were semantic nonsense. Thus, the ability to process syntactic features did not depend on the ability to process meaning.

As predicted, closer sampling of the text was evident in the more difficult reading. Four out of five subjects made more word level substitutions. Fewer

miscues involved groups of words or caused successive, related miscues. Dialect variations were practically non-existent, and grammatical intonation changes less frequent. Every subject's word substitutions had higher grapho-phonemic similarity to the text. Prediction ability continued strong as three out of five subjects produced a higher percentage of word substitutions with identical grammatical function. However, in spite of closer sampling and attention to grapho-phonemic and syntactic cues, the semantic cues were too weak to process meaning. Verification (correction) strategies were unable to compensate; and as a result, comprehension was lost and the reading less effective for all subjects.

A comparison of scores with the tenth and eighth graders in Goodman's (1973) study suggests that these junior college readers handle syntactic cues about as successfully as the average tenth graders, but that they feel freer to manipulate the structure of the text. Their lower percent of word level substitutions suggests that they are less tied to the word level. The freedom they exhibit is closer to that of the high proficiency tenth graders, and may suggest an extension of the trend already noted in younger readers by Burke (1969), Menosky (1971) and Goodman (1973).

Their comprehending and semantic acceptability scores are considerably lower--not nearly as low as low proficiency tenth graders--but well below 10LA for the easier reading and just slightly above 10LA for the more difficult. Yet, their recall comprehension scores are well above or close to the 10H readers.

Any conclusion concerning these facts is subject to further investigation, but they suggest several developmental possibilities:

1. These junior college readers have developed greater skill in organizing, using and interpreting information gained while reading.
2. They do more silent correcting.
3. They can get to deep structure without so much concern for surface structure.
4. Their greater experiential and conceptual background helps them fill in comprehending gaps.

Another developmental trend is suggested by their lower proportion of non-word substitutions. These junior college readers made fewer than even the high proficiency tenth graders, particularly during the more difficult reading, even with the score of the very atypical reader A included. Considering their low comprehending scores,

one is puzzled about this finding until one notes the high percentage of real but semantically unacceptable word substitutions instead. It seems probable that these below average junior college readers are familiar with many more words, but are unable to use them effectively.

These developmental issues need further investigation.

Discussion

The RMI coding sheets themselves provided a storehouse of information for this researcher to manipulate, examine and analyze. Answers to each question were tallied and the functioning of each cueing system clearly seen. Performance and competence levels were compared and correction rates determined. Percent of non-word and anomalous real words were examined. Extent of meaning change was discernible in relation to semantic acceptability after correction. Types of miscues were separated into four simple categories: substitutions, omissions, insertions (all at the word level) and others--multiple word, intonation, reversals, etc. Thus, insight was gained into the level of syntactic manipulation.

Unfortunately, however, as Burke (1973) confirms, some valuable information was not provided by the Inventory questions. Rather than using the Taxonomy with its

extremely complex distinctions, several could be added to the RMI. For instance, partial syntactic and semantic acceptability might be broken down into acceptability with prior, succeeding or entire sentence. Meaning change should have a finer distinction to show minimal change without drastically affecting Comprehension pattern as it does now. Finally, grammatical function of the Expected Response should be marked so that insight can be gained into the processing problems influenced by textual variations of different reading selections.

Processing Problems

The first 100 miscues of the junior college readers in this study were categorized according to grammatical function. Six broad categories were used, as suggested by Goodman (1973): nouns, verbs, noun modifiers, verb modifiers, function words and indeterminates.

Results indicated that function words and nouns caused the most miscues in Poison. Further analysis of the nouns showed that most of these were pronouns. The story involves three men and a snake, so the confusion over pronouns is understandable. Function words were involved in the narration of endless trivial details. Most unacceptable miscues caused only minor meaning change in

the overall story.

On the other hand, in Generation Gap, the frequency of noun modifier miscues rose dramatically, followed by verbs and nouns. Many of these involved nonword or anomalous real word substitutions. Multiple miscues often surrounded these. The unacceptable miscues caused extensive meaning change. Heavy use of simile and metaphor provided very weak context clues. The rhetorical devices of negative discard and sarcasm confused every reader. Several of the readers seemed unaware of the semantic significance of the function words--particularly clause markers and conjunctions--in argumentative prose such as Generation Gap.

Certain syntactic cues seemed weak for most of the subjects. Extended noun and verb phrases often caused intonation problems or changed inflectional endings on noun and verb modifiers. Readers were careless about verb markers: 'could' for 'would'; 'will' for 'would.' They added the negative 'not,' or dropped it with careless abandon. The past perfect tense was often replaced with the past tense if the following verb form allowed it, and gerunds were sometimes replaced by the past tense.

Suggestions for Further Research

Unfortunately, many of the effects of complex syntax were obscured by the heavy vocabulary load and rhetorical devices in Generation Gap. A miscue analysis using reading selections which vary only in syntactic complexity would show more clearly the relationship of language structure to meaning.

Evans and Dubois (1972) have criticized the diagnostic procedures used at the junior college level--namely, that they don't exist. They emphasized the need to understand why these students cannot cope with college texts. An analysis of miscues generated during the reading of selections from various college textbooks would shed more light on this problem. In addition, the value of using the RMI for diagnosis and individualized programming should be further investigated.

The size and nature of a reliable miscue sample has yet to be determined. In this study, RMI results based on the first 50 miscues varied significantly from results based on the total number of miscues; whereas, the first 100 miscues produced results comparable with the total. The former size sample might be adequate for classroom or clinical diagnosis, but the latter sample would be more reliable for basic research on the adult

reader. Corroboration of this conclusion is needed.

Further research should address itself to the developmental issues suggested in this study:

1. Does the tendency to manipulate longer units of language structure continue to increase beyond the tenth grade for readers of below average proficiency?

2. Are these readers able to get to deep structure with less concern for surface accuracy; or do they, in fact, correct surface accuracy silently in order to process the intended meaning?

3. Are the higher retelling scores in this study valid; and if so, what do they reflect? Do they reflect (a) the tendencies suggested in question two, (b) increased skill in organizing and using information or (c) greater experiential and conceptual background?

4. Is the tendency to substitute anomalous real words instead of non-words for difficult vocabulary concepts typical of readers at this age and proficiency?

Finally, the RMI should be used with older readers of varying proficiency and background in order to extend and verify the Goodman Model of reading through maturity.

p 93-107

"Poison" by Roald Dahl and "Why We Need a Generation Gap" by Roger Rapoport removed because of copyright restrictions. For full citations see "References."

APPENDIX B

RETELLING OUTLINES

Recall Comprehension

POISON

Points

(25) CHARACTER ANALYSIS

10 Recall

Harry Pope
Timber Woods
Krait
Dr. Ganderbai

15 Character Development

Harry Pope
lying in bed perspiring, nervous tense
English ('bloody')
dressed in pajamas
intolerant and prejudiced
refined

Timber Woods
considerate
not too imaginative

Dr. Ganderbai
competent
good planner
small, brown w/black eyes
Indian
steady, dedicated
strong will power

Krait
deadly snake
likes warmth

(75) CONTENT

20 Theme

Attitudes and beliefs can be as real a poison as a snake's.

10 Subtleties

A feeling of let-down and disappointments

10 Plot

Will Harry Pope be bitten by the Krait?

17 Events

Timber comes home late and discovers Harry still up.

Harry is lying in bed perspiring and Timber thinks he is ill with malaria.

Harry says a Krait (deadly snake) is lying asleep on his stomach under the sheet.

Timber gets a kitchen knife to carry while they are thinking up a plan.

Timber's first plan is to draw the sheet back (1) slowly, (2) swiftly.

Harry says get a doctor and Dr. Ganderbai is called.

Doctor decides to give him serum before planning further even though the serum is not very reliable.

Dr. Ganderbai decides to administer an anesthetic to the snake.

Dr. Ganderbai with exceeding care, pours the chloroform through a funnel and tube under the sheet, soaking the mattress.

After fifteen minutes they carefully draw back the sheet and do not find a snake.

The doctor questions whether Harry really saw a snake.

Harry calls him names.

The doctor leaves, recommending rest.

9 Setting

bungalow with balcony, screening, the bedroom
India (Bengal)
hot climate

9 Style or Bonus

100

Recall Comprehension

WHY WE NEED A GENERATION GAP

Points

25 THEME

This generation gap is an ideological gap
It is not curable in the sense that it will go away.
Furthermore, it is needed to save the world from destruction.

30 GENERALIZATIONS

This generation in power has "gone wrong" and thus as time goes on the gap will widen.
Youth has many goals different from the generation in power--not subject to maturation.
The perpetrators of this generational rebellion will be subject to the rebellion of their children, which will be different in kind.

35 SPECIFICS

Goals:

Political system must be reincarnated with leaders who have more concern for human life instead of death.

Technology must be tamed, pollution stopped, natural treasures preserved.

Start looking inward: discard materialistic values, empty stereotypes and status symbols; encourage mental growth throughout life.

Next generational gap will not be political and technical, but psychological:

Present youth subjected to constricting education.

Their children will need to free themselves from constraints of mind--to feel, be free of inhibitions, learn a new concept of time.

They will be met with love, not Mace, hopefully.

Present adults also concerned (many)

10 STYLE

Sarcasm
Indirect statement

Bonus

APPENDIX C

SAMPLE RMI CODING SHEET

READING MISCUE INVENTORY CODING SHEET

Miscue Number	Reader	Text	DIALECT 1	INTONATION 2	GRAPHIC 3 SIMILARITY Y	GRAPHIC 3 SIMILARITY P	GRAPHIC 3 SIMILARITY N	SOUND 4 SIMILARITY Y	SOUND 4 SIMILARITY P	SOUND 4 SIMILARITY N	GRAMMATICAL 5 FUNCTION Y	GRAMMATICAL 5 FUNCTION P	GRAMMATICAL 5 FUNCTION N	CORRECTION 6	SR. ACCEPT. 7	SEM. ACCEPT. 8	MEANING CH. 9	COMPREHENSION H	COMPREHENSION P	COMPREHENSION L	GRAMMATICAL RELATIONSHIPS S	GRAMMATICAL RELATIONSHIPS P	GRAMMATICAL RELATIONSHIPS ??	GRAMMATICAL RELATIONSHIPS
107 - 1	He's an envisionary	He envisions				—	—		—			—		P	P	P	P		✓			✓			
110 - 2	higs	hems				P			P		Y			Y	Y	N	N	✓			✓				
111 - 3	Faccultiuring	acculturating			Y			Y			Y			N	Y	P	P		✓			✓			
115 - 4	3 preconcepts	preconception			Y			Y			Y			Y	Y	N	Y	✓			✓				
116 - 5	that went and begins	they went and begin				—	—		—	—		—	—	N	P	P	Y			✓			✓		
117 - 6	that	they				P			P				N	N	P	P	Y			✓			✓		
119 - 7	perceivably	precisely			Y			Y			Y			N	Y	P	Y			✓		✓			
119 - 8	that	—				—	—		—	—		—	—	N	P	P	Y			✓			✓		
121 - 9	—	.		Y										N	P	P	Y			✓			✓		
123 - 10	—	and				—	—		—	—		—	—	N	Y	Y	N	✓			✓				
125 - 11	seem	seems			Y			Y			Y			N	N	N	N	✓		·			✓		
125 - 12	does	doesn't				—	—		—	—		—	—	Y	Y	P	Y	✓			✓				
127 - 13	last	latest			Y			Y			Y			N	Y	N	N	✓			✓				
130 - 14	and	—				—	—		—	—		—	—	N	Y	Y	N	✓			✓				
132 - 15	generations	generation			Y			Y			Y			N	Y	N	P			✓		✓			
132 - 16	Pks	Inc.			Y			Y					N	Y	Y	P	P	✓			✓					
135 - 17	—	entire				—	—		—	—		—	—	N	Y	Y	P		✓		✓				
140 - 18	dissenters	dissidents			Y			Y			Y			N	Y	Y	N	✓			✓				
Generation Exp. Subject C.		COLUMN TOTAL												COLUMN TOT.											
		PERCENTAGE				·								PERCENTAGE											
		QUESTION TOT.												PATTERN TOT											

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COURSE WORK

Fall, 1969		Instructor
299:320	Foundations of Reading Instruction	Fry, Mountain
290:502	Principles and Theories of Learning	Bloom
Spring, 1970		
299:564	Remedial Reading	Fry
299:565	Laboratory in Remedial Reading	Swalm
Fall, 1970		
299:515	Teaching Reading Improvement, Secondary, College and Adult	Shew
290:501	Introduction to Principles of Measurement	Pascale
Spring, 1971		
290:514	Introduction to Adolescent and Young Adult Years	Zito
299:510	Reading and Communication	Shew
Fall, 1971		
615:503	Linguistic Bases of Language Teaching	Barone
299:566	Seminar in Reading Research and Supervision	Kling
Spring, 1972		
610:582	Reading Materials for Adults	Simpson
299:599	Thesis Research	Kling

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A PSYCHOLINGUISTIC ANALYSIS OF ORAL READING MISCUES BY JUNIOR COLLEGE STUDENTS

AN ABSTRACT OF A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

OF

RUTGERS UNIVERSITY

THE STATE UNIVERSITY OF NEW JERSEY

BY

DOROTHEA R. HOFFNER

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

MASTER OF EDUCATION

COMMITTEE CHAIRPERSON: MARTIN KLING, PH.D.

NEW BRUNSWICK, NEW JERSEY JANUARY, 1974

ABSTRACT

This descriptive study, based on the Goodman Model of reading, examined the oral reading behavior of five junior college students of below average reading proficiency. The Reading Miscue Inventory (RMI) was used to analyze and compare the miscues they generated while reading two selections varying in difficulty. The study addressed itself to two main questions: Do these readers use a process consistent with the Goodman Model of reading? Does the process differ in any way with that used by eighth and tenth graders reading the same selection?

In general, the predictive and explanatory powers of the model were confirmed. All readers actively constructed the text, producing many variations from it. A large portion of these were fully acceptable and identical in meaning to the text. The operation of three language cueing systems was apparent: grapho-phonemic, syntactic and semantic. Their functioning and interaction differed between readers and with text difficulty. During the more difficult reading, grapho-phonemic cues were more closely attended to by all subjects; yet syntactic cues continued to function strongly, while semantic cues became so weak that many miscues, though grammatically correct, failed to reproduce the intended

meaning of the text. As a result, both recall and process comprehension dropped considerably.

A comparison of selected results with eighth and tenth graders reading the same selections suggests that these junior college readers manipulated the text more freely, were able to get to deep structure with less concern for oral surface accuracy and showed a greater tendency to substitute anomalous real words instead of nonwords for difficult vocabulary concepts.

Further research using the RMI with older readers of varying proficiency and background is suggested--not only to further test the Goodman Model, but to confirm or disconfirm the developmental issues suggested by this study.